Recombinant NOVA1 protein (His tag)

Catalog Number	544677
Synonyms	Neuro-oncological ventral antigen 1; Onconeural ventral antigen 1; Paraneoplastic Ri antigen; Ventral neuron-specific protein 1
Species	Human
Expression System	E. coli
Accession	P51513
Molecular Weight	Predictes a molecular mass of 9.73 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 10 kDa band.

Product Information

Sequence Region	170-244
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 170-244 aa (P51513) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 µg/µl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant RNA-binding protein Nova-1 fragment (amino acids 170-244) is a high-purity, functional protein domain designed for neuroscience and splicing research. This 75-amino acid fragment fully encompasses the KH 2 domain, enabling targeted studies of Nova-1's RNA-binding capabilities and its role in neuronal alternative splicing regulation. Nova-1 (Neuro-oncological ventral antigen 1) is a neuron-specific RNA-binding protein that functions as a key regulator of alternative splicing in the nervous system. It binds specifically to YCAY-rich sequences in pre-mRNA and exhibits dual functionality: binding to exonic YCAY clusters blocks U1 snRNP binding and promotes exon exclusion, while binding to intronic YCAY clusters enhances spliceosome assembly and promotes exon inclusion. This asymmetric regulation mechanism allows Nova-1 to fine-tune spliceosome assembly and control alternative splicing patterns critical for neuronal function. Nova-1 localizes to the nucleus and autoregulates its own expression through splicing repression. It has been shown to regulate splicing of neurotransmitter receptors including the glycine receptor alpha-2 chain and gamma-aminobutyric-acid receptor gamma-2 subunit, highlighting its importance in neuronal development and function.